

Resources & Environment



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Environmental Policy & the WTO: Unresolved Questions

The need of countries to protect their environment and to conserve natural resources does not fit neatly into the free market framework that underpins the Uruguay Round Agreement (URA) on Agriculture. Under the URA, participating nations are required to reduce the level of domestic support for agriculture as well as agricultural trade barriers. Unless carefully designed with economic forces in mind, environmental policies can effectively alter production and price levels and thereby affect trade patterns.

The World Trade Organization (WTO)—the institution that enforces URA rules—recognizes that environmental protection is a legitimate policy goal. When environmental policies affect agricultural production and trade only minimally, such policies are permitted by the WTO to be exempt from the country's commitments to reduce support to agriculture, under the "green box" exemption.

Policies that qualify for the green box exemption must not support prices or increase consumer costs, and must be financed by the federal government. Additionally, green box environmental programs must limit subsidies to the farmers' extra cost of complying, prices and pro-

duction cannot be factors in green box land retirement programs, and land must be retired for a minimum of 3 years.

With criteria for green box designation already defined, discussions between now and the conclusion of the WTO mini-round on agriculture scheduled to begin in late 1999 may address a number of unresolved questions. These include how to assess tradeoffs between environmental protection and trade distortion and how to interpret "minimal trade-distorting effects."

The Rationale for Green Box Environmental Policies

In the U.S., numerous environmental and natural resource policies are designed to limit the damage caused by agricultural activities. These policies—frequently implemented through a partnership between Federal and State governments—are directed at a diverse range of problems that include:

- *surface water* pollution attributable to agricultural production, including runoff from crop and livestock operations;
- *loss of wetlands* that otherwise improve water quality, reduce soil

erosion, conserve surface water, improve subsurface moisture, contribute to flood control, enhance natural beauty, and provide habitat for migratory waterfowl and other wildlife;

- *soil erosion* which diminishes recreation activities, increases costs of water treatment and dredging of navigation channels, silts up drainage and irrigation channels, and causes the sedimentation of reservoirs; and,
- *improper management of land*, which ultimately harms the environment through sedimentation, pollution of surface waters, and loss of highly productive and unique soil.

A free market framework may not effectively protect the environment and conserve scarce natural resources. For instance, when the private benefits of conservation practices are small, farmers and ranchers may contribute to unsustainable patterns of natural resource use and environmental degradation that is excessive from a public perspective. Such "market failures" are unlikely to be self-correcting, and the WTO acknowledges that environmental protection and natural resource conservation are legitimate public activities.

Environmental and natural resource green box policies rely on a mix of instruments such as technical assistance, cost-sharing, rental and easement payments, and conservation research and development. In the U.S., green box expenditures on rental and easement payments have increased in relative importance since 1985 compared with expenditures of cost-share programs for conservation practice applications. Most rental payments are administered through the Conservation Reserve Program (CRP) for land taken from production and turned into protective cover. Through the Environmental Quality Incentives Program (EQIP), producers implementing structural practices (e.g., animal waste management facilities, terraces, and filterstrips) receive up to 75 percent of the projected cost through cost-share agreements with the Government or receive incentive payments for adopting management practices for conservation purposes.

These policies can affect production levels, prices, and patterns of trade. If large

enough, land retirement programs can reduce production for specific commodities. In 1995, 9.4 percent of total cropland in the U.S. was idled under the CRP. Although the CRP aims to retire environmentally sensitive cropland, it may generate output effects. USDA's Economic Research Service has shown that environmentally sensitive land might not be economically marginal in terms of production potential.

Green box programs such as the EQIP can also affect costs through the introduction of more environmentally benign technologies which might not have been adopted in the absence of government cost-share programs. If new technologies are adopted on a large scale, they can potentially affect production, prices, and trade. Programs such as the CRP and EQIP are presumed to have minimal trade distorting effects, and are thereby eligible for WTO's green box exemption.

Questions for the Upcoming WTO Mini-Round

How will the tradeoffs between environmental protection and trade distortion be assessed?

A sound evaluation of tradeoffs is needed to determine eligibility for inclusion in the WTO's green box. Otherwise, national governments could use the green box exemption to further protectionist goals or to affect the terms of trade.

Environmental cost-benefit analysis can be used to evaluate the economic effects of green box policies. Data on indicators of environmental quality or degradation and on economic values of environmental quality changes are needed to implement this technique. But because markets for attributes of environmental quality may not exist, it is difficult to assign monetary values to environmental quality changes within a country.

Also, environmental quality changes in one country may be valued differently by consumers in other countries, further complicating the assignment of monetary values. For example, trade barriers may be erected to prevent imports of genetically modified crops, which are believed to enhance environmental quality in the

Selected Green Box Environmental Programs

USDA-Administered Programs

- ***Environmental Quality Incentives Program (EQIP)***—Through use of technical assistance, education, cost-sharing, and incentive payments, EQIP assists farmers and ranchers in adopting management techniques that reduce nonpoint surface and groundwater pollution. Fiscal 1998 appropriated funding: \$200 million.
- ***Conservation Reserve Program (CRP)***—Since 1987, the CRP has reduced annual erosion by one-fifth by providing rental payments to agricultural producers who retire environmentally sensitive cropland. Fiscal 1998 expenditures: \$1.8 billion.
- ***Conservation Technical Assistance (CTA)***—Technical assistance for farmers and ranchers who implement soil and water conservation and water quality improvement. Fiscal 1998 appropriated funding: \$ 541.7 million.
- ***Farmland Protection Program (FPP)***—The FPP allocates funds for purchase of conservation easements and other types of interests in land that has prime, unique, or other highly productive soils. USDA spent \$18 million in fiscal 1998.
- ***Wetland Reserve Program (WRP)***—The WRP assists landowners in returning farmed wetlands to their original condition through easement payments and restoration cost-shares. Fiscal 1998 appropriated funding: \$218.5 million.
- ***Emergency Conservation Program (ECP)***—The ECP provides financial assistance to farmers recovering from natural disasters and conserving water during periods of severe drought. Fiscal 1998 appropriated funding: \$34 million.
- ***Wildlife Habitat Incentives Program (WHIP)***—The WHIP promotes voluntary implementation of on-farm management practices to improve wildlife habitat. Fiscal 1998 appropriated funding: \$30 million.
- ***Conservation Farm Option (CFO)***—The CFO is a pilot program for eligible producers that consolidates payments from environmental programs into a single payment in exchange for implementing practices to protect soil, water, and wildlife. Fiscal 1998 authorized funding: \$15 million, reduced to \$11 million by supplemental appropriations.

Environmental Protection Agency-Administered Programs

- ***Nonpoint Source Program***—Established by Section 319 of the Clean Water Act, this program provides States with program guidance, technical support, and limited funding to establish nonpoint source pollution management plans. Fiscal 1998 operating plan budget: \$119.3 million.
- ***Coastal Zone Management Act Reauthorization Amendments (CZARA)***—States with an approved coastal zone management program were required to submit to the Environmental Agency before July 1995 a program that outlines management measures for nonpoint source pollution to restore and protect coastal waters. Implementation of plans is not required until 1999.
- ***Wellhead Protection Program***—Authorized by the Safe Drinking Water Act, this program protects groundwater supplies used as public drinking water from contamination by agricultural chemicals, including pesticides and nutrients. Fiscal 1998 operating plan budget: \$12.1 million.

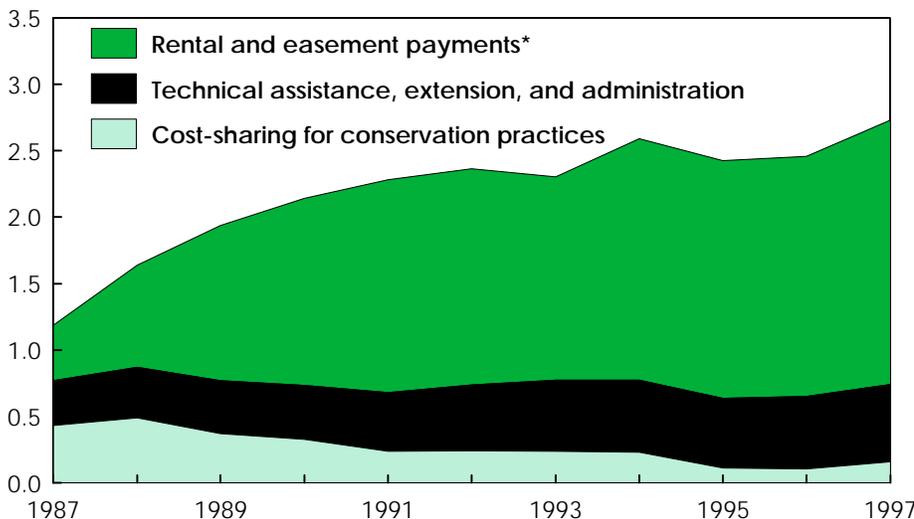
State-Administered Programs

- ***Water Quality Improvement Programs***—Some 44 States have passed laws or instituted programs to protect water quality. States use a variety of approaches to address water quality problems, including economic incentives, education programs, controls on inputs and practices, and controls on land use.

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Rental and Easement Payments Account for Most U.S. Green Box Expenditures

\$ billion



*E.g., Conservation Reserve Program and Wetland Reserve Program.
Economic Research Service, USDA

exporting country (by reducing chemical inputs in some cases) but not in the importing country (due to concerns about the technology in general). Such difficulties may limit the WTO's capacity to determine whether the environmental benefits supplied by a green box policy justify the costs of trade distortion.

Once countries submit domestic policies supposedly falling into the green box, how will the WTO decide which policies are legitimate?

Because certain environmental and natural resource conservation green box policies allow for small changes in production, a country may have an incentive to use domestic policy to increase its competitiveness on the world market (e.g., paying livestock producers for

maintaining open landscapes). And while failure to adhere to most requirements of the green box is fairly easy to detect, the meaning of "minimal trade-distorting effects" is open to interpretation.

In some instances, environmental and natural resource policies are used to correct for pre-existing market failures (e.g., idling highly erodible land that would otherwise be used for production). In these cases, the actual effectiveness of such policies depends on their ability to reallocate resources in a way that results in *more than minimal* trade effects. An open question is whether placement of such policies in the green box will be permitted.

Will the WTO limit the scope of environmental subsidies?

Agriculture provides important environmental services while curtailing others. On the positive side, farmers who maintain certain wetlands help improve water quality and provide floodplain areas to lessen flooding damages. Wetland preservation may also protect wildlife. Agricultural production may result in carbon sequestration (i.e., in soil), helping to reduce greenhouse gas concentrations. Providing environmental amenities such as rural landscapes is another example.

But agricultural activities also contribute sediment, nutrients, pesticides, and potentially, pathogens to water resources, possibly impairing drinking water, recreation, navigation, and other water uses. Wetlands have been converted to agricultural use.

An issue for the WTO is the extent to which nations may provide support for producers to provide amenities or to prevent impairments to the environment. If a country subsidizes agriculture for supplying environmental services, criteria have yet to be settled upon for determining the legitimacy of such claims.

Should developing countries be treated in the same way as developed countries?

As a result of funding capabilities and preferences, developed countries typically spend proportionally more on funds for environmental and natural resource policies than their less developed counterparts. In reality, many of the environmental and resource problems faced by developing countries are more severe. Still at issue is whether less developed countries should be allowed greater flexibility in expenditures on environmental and resource policy.

Future discussion on the green box must tackle some of these issues. Otherwise, some countries could use the green box exemption to further a protectionist trade agenda or to manipulate the terms of trade in their favor.

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